

NOTES ON THE HABITS OF SOME CEYLON BATS

BY

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MEGADERMATIDÆ.

Megaderma spasma ceylonensis.—The Ceylon Vampire Bat.

Singhalese—Tutica or Kokitan Voula. Tamil—Vava.

This is the common Vampire Bat of the Island. Its distribution is local but it is common in parts, especially in the Western Province.

It lives in colonies—generally of two to a dozen or so, but sometimes much larger—in the lofts of the better built native houses or in abandoned dwellings.

It always seems to select a house with a tiled roof, avoiding where possible one with only 'cadjans' or cocoanut leaf thatching. The Singhalese consider it unlucky to have these bats in their houses, but, owing to their religious teachings, will not kill them, and in some cases, will not even drive them out. Yet they seem to be only too glad to see other people do it for them. They sometimes complain that they are bitten at night by these bats, but this statement requires confirmation.

Owing to its very broad, cambered wings, it has a very silent nightjar like flight. It flies low, twisting in and out among the trees and light jungle surrounding the villages, and does not appear to come out into the open.

When disturbed and driven out of the houses it will take refuge in the surrounding palm trees; returning again as soon as the noise has subsided. It is rather difficult to get rid of, returning persistently to its chosen haunts.

The sexes live together all the year round, together with the young one which is produced in May. There is only one at a birth. The males always seem to be more numerous than the females.

Lyroderma lyra lyra.—The Indian Vampire Bat.

Singhalese—Tutica or Kokitan Voula. Tamil—Vava.

Rather uncommon and only occasionally met with. A few have been found in the Northern and Western Provinces. One on a tree on the north-west coast, a few in houses round Colombo, and a small colony (which used to inhabit an abandoned plumbago pit) in Kalutara. Another colony has been found in an abandoned house near Matugama in Kalutara. It seems to be chiefly composed of males. As with the *Megaderma*, the males seem to outnumber the females.

Two males kept in captivity in a large box-cage devoured a Dwarf *Pipistrellus* (*P. minus*) which was put in with them consuming everything except the wing membrane. They also consumed a mouse (dead) and part of a young gerbille.

VESPERTILIONIDÆ.

Pipistrellus ceylonicus ceylonicus.—Kelaart's Bat.

Singhalese—Podi Voula or Kirri Voula. Tamil—Sinna Vava.

The present species is confined to the higher hills and does not seem to descend at all into the low country. It is very common in Dimbula and Dickoya (4,000 feet to 5,000 feet) on the Western side of the main range and also in Passara (3,500 feet) on the Eastern side. In the former districts it is almost the only bat to be seen flying about in the evening. It comes out early, almost as soon as the sun has set, and flies round bungalows and trees, dexterously hawking for insects. It does not fly particularly fast or high, but continually turns, twists and wheels in its flight. As the evening closes in, it appears to ascend higher and fly rather straighter. By day it hides in holes in trees, hollow

branches, etc., but does not hang suspended as do the *Rhinolophidæ* preferring to cling to the sides with feet and wing claws while retaining the head downwards position.

The sexes live together at any rate for the greater part of the year forming colonies of four or five to a dozen or more; the size of the colony, as usual, depending on the room available. Females have been found with young in September. Like others of the same genus it probably breeds more or less all the year round. Two, (sometimes only one) young are produced at a birth and are naked and blind when born.

Pipistrellus coromandra.—The Coromandel Pipistrelle.

Singhalese—Podi or Kirri Voula. Tamil—Sirra Vava.

This Pipistrelle seems to take the place of *P. mimus mimus* on the East side of the Island, its range stretching round to the South where it meets *P. mimus*. It is found both in the low country and in the Uva hills to at least 3,500 feet altitude. It is not found at all on the West coast. Its habits seem to be almost identical with those of the next species except that in the hills it probably lives more in hollow trees and branches. On the wing it is very easily confused with *P. mimus*.

Pipistrellus mimus mimus.—The Southern Dwarf Pipistrelle.

Singhalese—Kirri Voula. Tamil—Sinna Vava.

This is the smallest bat in the Island. The male, which is smaller and usually darker in colour than the female, is really minute for a mammal, though the wings give it an appearance of some size in flight. It is very common all over the Western and South-western portions of the Island and ascends the hills as far as Kandy. But in the East and South-east it gives place to the preceding species. It is especially common in Colombo and Kalutara.

In the evening it is usually the first bat to make its appearance, coming out as it does almost as soon as the sun has set. On first appearing, after circling once or twice round the bungalow or other building in which it has spent the day, it flies fairly high up into the sky, with quick wing beats and many twists and turns. As the evening closes in, however, it generally descends to about the level of the tree tops and continues hawking for insects along the edge of the jungles or over the paddy fields and clearings. It is rather a familiar little beast and the male especially, often comes into bungalows and hawks insects round the lamp. By day it hides in small colonies in bungalow roofs, living in the small space between the rafters and the tiles and in holes in walls of buildings. Here it may easily be caught by hand, as it is not particularly quick at taking flight and escaping. It does not hang head downwards, as the majority of bats do, but lies on the rafter, head up, grasping it with all its claws.

At certain seasons of the year the females and young live together by themselves, but at other times the males are found in the same colony. They (the males) are always much less common than the females. When disturbed during the day this bat will fly round for sometime and return later if possible to the same quarters; but should this be prevented it will seek others in another part of the building or occasionally settle in a tree until all danger is past. When settling in a tree it has been observed to pitch on a leaf, head up, and grasp the leaf stalk with its wing claws, in which position it remained until captured. It seems to breed more or less all the year round. Females with young have been found in March, May and December. The mother has either one or two young (at a birth) which are born naked, blind, and helpless, but with the instinct to cling to the mother's breast. They accompany her on her flights abroad until they become too heavy and are old enough to be left behind. A mother seen by day, with two large young attached to her pectoral mammae flew just as agilely as usual, though she was rather slow in taking off and a little laboured in gaining height. At the time the young are born the males seem to live separate from the colony and may then sometimes be found solitary on palm-trees hiding

beneath the hanging dead leaves. The probable explanation, why this species rarely lives in holes in tree trunks, etc. in the low country, is that it is afraid of attacks by the large Monitor lizards which are good tree climbers and often enter woodpeckers and other birds' nesting holes.

Hesperopterus tickelli.—Tickell's Bat.

Singhalese—Podi or Kirri Voula. Tamil—Vava.

Locally distributed, but very common in parts. In the rubber districts of Kalutara, this is the commonest bat seen in the evenings; being very noticeable as it always appears so early, and haunts tennis courts, bungalow clearings and the like. Along the actual sea coast and in the Palm-belt which runs from Colombo to Galle, however, it is rarely found, its place being taken by the stronger and larger *Scotophilus khuli*. It has also been recorded from Anuradhapura, but does not seem to be so common in that district. It probably does not ascend the hills to any very great altitude. In the evening it appears early, quickly following the little Dwarf Pipistrelle, (*P. minus*), but unlike that species, it has a definite beat to which it returns night after night, at the same time almost to the minute. The beat, which is usually close along the trees on the edge of a clearing, is jealously guarded from intruders of its own species, which are chased and hunted out of the territory. When two bats are observed on the same ground, they are almost sure to be male and female, for at certain seasons they seem to fly together. Its flight is rather slow and steady, beating up and down the territory or wheeling in large circles some twenty or thirty feet up, with an occasional swoop down nearly to the ground. It flies silently, but has a shrill squeaking cry which it occasionally utters when wounded. By day it hides away in jungles, presumably in hollow trees or like places, but it is very difficult to discover its retreats. The young, (one only) is produced at the end of May and is very large at birth.

Scotophilus khuli.—The Common Yellow Bat.

Singhalese—Podi Voula. Tamil—Vava.

Like the preceding species this Bat seems to be very locally distributed, being common in some parts, rare in others.

In the Western province it is extremely numerous in the Palm-belt running along the coast from Colombo to Galle, but, inland of this, it is seen more rarely;—though, as it appears late in the evening, it is easily overlooked and likely to seem more rare than it really is. It seems to prefer the neighbourhood of Cocoa-nut palms and is always more numerous where they abound. It appears rather late in the evening, just before it is quite dark and usually flies rather low down, not more than ten or fifteen feet up. It likes large open spaces, (preferably near Palm trees), paddy fields, the foreshore on the coast, roads and canals, railways, etc., up and down which it flies quite straight for several hundred yards before turning and retracing its path. It will often fly quite low down, within a foot or two of the ground, at a fairly rapid, though steady pace, with few twists or turns. It flies silently. There is a great deal of variation both in size and colour in this species. Typically it is yellowish brown, rather lighter and more yellowish underneath, but bright chestnut specimens are common and small greyish ones not rare. All these different varieties are found in the same localities and apparently live together.

MINIOPTERINÆ.

Miniopterus fuliginosus.—The Long-winged Bat.

Singhalese—Kirri Voula or Podi Voula. Tamil—Sinna Vava.

This species seems to prefer a fairly dry climate. It is common in the Uva province, on the Eastern slopes of the hills, to 3,500 feet altitude and in the North Central province (600 feet); but is entirely absent from the Kalutara district of the Western province and from the Western slopes of the hills where the climate is very much damper. It appears fairly early in the evening, flying rapidly and

fairly straight, about 30 feet to 40 feet up. Though rapid in flight its pace cannot be compared with that of either the *Taphozous* or *Saccolaimus* which far excel it, flying as they do with almost Swift-like flight. On the wing, in the early evening, it may easily be recognised and identified by its tail which is proportionally longer than in any other bats.

EMBAILONURIDÆ.

Taphozous melanopogon.—The Black-bearded Sheath-tailed Bat.

Singhalese—Podi Voula. Tamil—Sinna Vava.

This bat has only recently been found in Ceylon. In August 1920 a large colony was discovered in some rocks near a Singhalese village (about half a mile from the sea) in Kalutara on the West Coast. The Colony was composed of males, females and young of all ages, numbering some forty or fifty altogether. They were living in the fissures and crevices of a large piled mass of rocks and boulders, partly overgrown with brush-wood, such as is common all over the Western low country. When first found, although the morning was well advanced and the sun blazing down, the bats were quite lively, many of them continually flying up and down and in and out of the caves and overhanging rocks, uttering their shrill squeaking cry the while. On alighting after a short fly round, they would clutch the rock wall with the hind feet and hooks on the wings, hanging head downwards, and would run swiftly backwards up the rock into a fissure a yard or more away.

For a bat they are wonderfully agile when in this prone position; the way they run into and hide in the crevices and fissures of the rock reminds one greatly of the small crabs which swarm on the rocks by the seashore, which they much resemble in some of their movements. On being disturbed many flew away among the Coconut palms, uttering a shrill cry, very like that of the *Saccolaimus*, though perhaps not quite so highly pitched, while others hid deep down in holes and fissures of the rock.

The two sexes were there in about equal numbers. In September many of the females had young clinging to them, while other young ones almost full-grown were hiding in the crevices. Some females examined had one young apiece, the young being naked and blind when born. The flight of this species is very rapid, like that of the *Saccolaimus* and its habits on the wing are probably almost the same as those of that species. When returning to its quarters it circles round high overhead, suddenly dropping with a rush of wings and swooping down alights on the rock in the head downwards position with its partially extended wings resting against the wall. Then looking round it either runs backwards into a crevice or takes flight again and has another try. Of the males examined, all but one had the black beard from which the species takes its name. This one individual, however, had no sign of any darkening of the throat, though there is no reason to suppose it was not breeding like the rest. The haunts of this species very soon become foul, and have a curious unpleasant musty smell rather different to that of the *Rhinolophidæ*, due presumably to the accumulated droppings.

Taphozous longimanus.—The Long-armed Sheath-tailed Bat.

Singhalese—Podi Voula. Tamil—Vava.

A rather uncommon species which, so far, seems to have been recorded only from the Kalutara district. By day it hides, singly or in pairs, in the crowns of Coconut palms, usually choosing a tall tree with a few dead leaves hanging down against the trunk. It either creeps in behind the leaf stem or more rarely hangs on to the trunk behind one of the dead leaves. The Singhalese often disturb them when they are ascending the trees to pluck the coconuts and can usually point out the trees to which they are partial.

It comes out fairly early in the evening, following close upon the *Saccolaimus*, which it must resemble in flight; but from which it can be distinguished, if

the light is sufficiently good, by the much lighter colour of the wing membrane and its slightly smaller size.

It generally flies silently but has a cry which it uses on occasions which to the human ear is identical with that of the *Saccolaimus*. When wounded and on the ground it utters a shrill piercing squeak which, not only attracts others of its own kind but also many *Saccolaimus*, which come swooping down out of the darkening sky with a rush of wings, dashing past within a foot or two of the ground and ascending again into the blue. In like manner it will answer to the cry of the wounded *Saccolaimus*. Individuals differ much in colour. Some specimens being a light cinnamon brown, while others are of a greyish ash.

Saccolaimus saccolaimus.—The Pouch-bearing Sheath-tailed Bat.

Singhalese—Podi Voula. Tamil—Vava.

A fairly common bat evenly distributed over the greater part of the low country and ascending the hills in the Uva province, to at least 3,500 feet.

It leaves its day hiding place early in the evening, mounting swiftly into the sky with steady powerful wing strokes, then, having gained an altitude of three or four hundred feet, it commences to feed, twisting and turning and flying round in larger or smaller circles, or streaking off over the rubber and jungle for a mile or two in some direction. It flies wonderfully rapidly, and, with its long rather pointed wings, might easily be mistaken for a Swift, with numbers of which it may often be seen flying in the evening sky. In fact it might well be described as the Swift of the Bat world.

As the evening closes in, it generally drops to a rather lower altitude, following the insects on which it feeds; but this seems to depend largely on the weather conditions as on certain evenings it will continue to fly high until it is quite dark. Occasionally as it flies along, it will swoop down almost to the ground, quickly mounting again into the skies.

As it flies or swoops it continually utters a shrill squeaking cry, which always heralds its approach. It rarely flies silently.

When wounded, too, and lying on the ground, it utters this peculiar cry, which then attracts all its comrades, flying within hearing. These come dashing down, swooping to within a foot or two of the ground, circling up and swooping down again continually—they too uttering the same call. A few *T. longimanus* will also answer to it.

During the day it lives in small companies of five or six, of both sexes, in hollow trees, usually choosing an old hollow decayed and broken off Kitul palm. Here it lives, some way down, clinging to the sides, head downwards, with feet and wing claws. When disturbed it runs backwards up to the entrance, where it hangs for a few moments, before taking flight, in order to ascertain the cause of the disturbance.

Females have been found with young early in September in October and in November. They bring forth only one at a birth.